Coastal Wetlands Planning, Protection and Restoration Act Task Force

September 2000

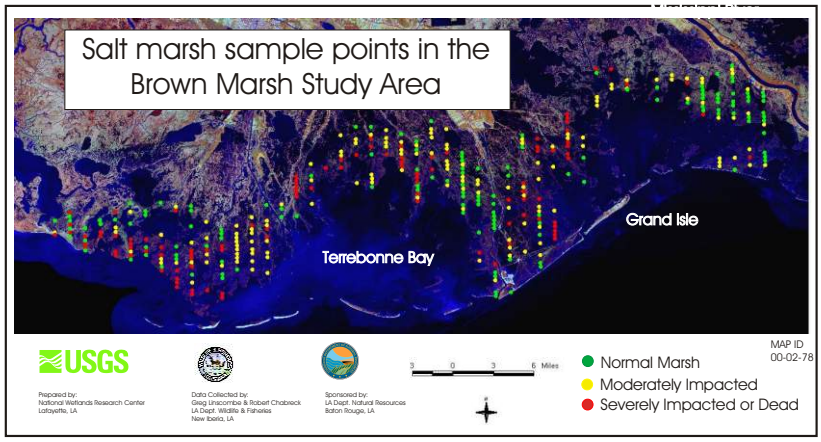
Brown Marsh Severity

Aerial surveys of salt marsh damage in the Barataria & Terrebonne basins

Background

Salt marshes in coastal Louisiana are undergoing a rapid and most unexpected change for the worse. In an effort to help quantify the salt marsh dieoff, Greg Linscombe, Louisiana Department of Wildlife and Fisheries, and Robert Chabreck, Louisiana State University-retired, have conducted the first quantitative survey of marsh damage in the Barataria and Terrebonne Basins. The surveys were conducted from a helicopter hovering at approximately 20 ft above the ground. At fixed intervals, the condition of the marsh was visually assessed by the biologists. In the salt marsh, transect lines were spaced 1.87 mi apart and points on the transects were sampled every half mile, for a total of 376 points. The exact locations of the samples were recorded with a GPS unit and will be used by other scientists in the ongoing brown marsh assessment. They classified the marsh condition into three main categories: (1) normal - green vegetation, (2) moderately impacted marsh - greenish/brown vegetation, and (3) severely impacted or dead marsh - the marsh was mostly brown or black or totally devoid of vegetation.

Above are salt marshes that are normally an olive green. This picture shows damaged salt marsh in various levels of dieback. Salt marshes on the edge of bayous and streams are less affected than interior marshes.

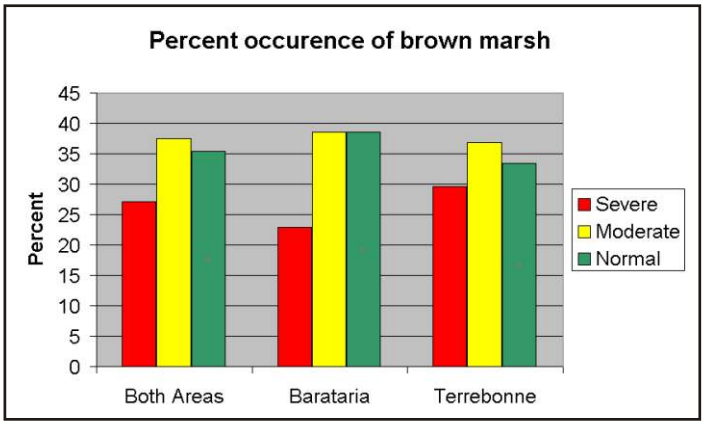


This survey is one of the many studies being conducted or planned to determine the extent and severity of the brown marsh. Resource managers and scientists are beginning to address the problems associated with the marsh dieback. These problems include determining the extent and severity of the dieoff, the cause(s), the socioeconomic losses, and determining restoration options.

Survey Results

The Barataria and Terrebonne basins have a total of 389,160 acres of salt marsh habitat. If the results of the survey are extrapolated to the entire study area, then over 105,570 acres of salt marsh wetlands can be classified as in severe or critical condition, and 145,935 acres are in the moderately impacted category. Surprisingly, only 137,655 of 389,160 are in normal condition, or only 35% of the salt marshes are not showing signs of dieback.

A total of 251,505 acres of salt marsh have been severely or moderately damaged. This accounts for 65% of the salt marsh in the Barataria and Terrebonne basins. It is still too early to determine the long-term damage, but scientists fear that much of the exposed land could erode from winter storms before the vegetation regrows.



Further Information

For the latest information, including maps and data, please go to the Breaux Act Web site www.LAcoast.gov/brownmarsh or call the Louisiana Governor's Office of Coastal Activities at 225-342-3968.